

STATE OF BRUNEI

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Annual Report on the Medical  
Department for the year 1936

BY

W. G. EVANS

*Medical Officer*

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SINGAPORE :

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# ANNUAL REPORT ON THE MEDICAL DEPARTMENT, BRUNEI FOR THE YEAR 1936

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## I.—GENERAL

1. Brunei is a State on the North Coast of Borneo about the size of the English County of Devon (some 2,280 square miles). There is a coast line of about 100 miles and a population of over 30,000 (*see* Appendix V, Table I and map in back cover).

The population figure given in the appendix probably errs on the large side as the yearly figure is obtained from the last census figure (1931) by adding births and immigrations and subtracting deaths and emigrations, and it may be supposed that registrations of both the former are more complete than those of the latter two.

2. The Sultan of Brunei is the Ruler of the State. By an agreement made in 1906 a British Resident was accepted whose advice must be asked and acted upon on all questions other than those touching Mohammedan religion.

The administration of Government is in the hands of the British Resident who is invariably a member of the Malayan Civil Service.

3. There are two main centres of population, Brunei Town (Darul-Salam) and Kuala Belait (and Seria), transport between them being by car on road and beach and taking in fine weather about three hours, in bad weather becoming at times impossible. Road improvements during the year rendered the occasions fewer when cars were unable to pass but the state of the beach remained a limiting factor. Belait and Seria are the centres of activity of the British Malayan Petroleum Company. Access to other parts of the State is only by river, in motor launch or, in the case of more inaccessible areas, in perahu (native dug-out).

4. The main features of the year from a medical viewpoint are, firstly, an all-round increase in the amount of medical work done and, secondly, a disappointing increase in the mortality rates. It is to be expected that in a small population fluctuations in the rates will be high, but the causative factors of such a large increase remain at present a matter for conjecture.

It is perhaps noteworthy in this connection that, in the writer's opinion, the high mortality in Brunei depends largely on dietary deficiencies and that a slight increase in the financial position and sophistication of such a backward people paradoxically increases the incidence of such deficiencies. The penniless peasant of Brunei who lives on home-produced and wild foodstuffs has no beri-beri, whereas the river-dweller who earns a small salary lives on the verge of avitaminosis.

1936 was a somewhat more prosperous year than 1935.

## II.—ADMINISTRATION OF THE MEDICAL DEPARTMENT

5. The whole Medical and Health administration of the State is in the hands of one officer who is invariably a member of the Colonial Medical Service seconded from Malaya. The writer held this post throughout the year.

The full establishment of the Department in 1936 is given at Appendix I. In addition to this a Sanitary Inspector holding the Diploma of the Royal Sanitary Institute is on the establishment of the Assistant Resident at Kuala Belait.

6. Revenue collected by the Department in 1936 was \$2,512.20 and expenditure was \$42,108.79 compared with figures of \$1,627.16 and \$41,808.84 respectively for 1935. The excess of expenditure over income was less than last year by nearly \$600. Medical Department expenditure was 6½% of the total State Expenditure exclusive of extraordinary expenditure on debt redemption. The corresponding figure last year was 7¼%. Details are given in Appendix II.

### III.—MATERNITY AND CHILD WELFARE

7. There were seven female officers engaged in this work during the year, *viz.* one fully qualified nurse trained in Singapore, one assistant nurse, one midwife, one assistant midwife, two female attendants on the establishment and one on daily wages. There was an increase in the amount of work done compared with 1935 but the infantile mortality rate was greater.

Practically all births in the Brunei town and river area are now attended by officers of this department. Figures are given in Appendix III.

8. Two events of significance occurred in December, the first European maternity case ever to be delivered under our care, and the first Brunei Baby Show.

The success of the baby show was beyond all expectations. Preparations were made for about one hundred babies, but the number that appeared was beyond computation. There were certainly over five hundred babies, each accompanied by at least two adults. The scene in and around the hospital on December 20th beggars description but everyone went away pleased.

9. Five hundred and twenty-nine maternity cases were attended in their own homes with four deaths and two cases of puerperal fever. Fifteen cases were delivered in hospital. In addition to these maternity cases, 4,330 other cases were seen in the Maternity and Child Welfare Clinic. The figures for 1935 were 514 deliveries and 3,186 other cases.

10. Native methods of midwifery as practised by the bidans (native midwives) in Brunei are not unduly bad, if somewhat unorthodox according to Western ideas. A woman in labour lies naked on the floor surrounded by a gaping crowd of relatives, friends and neighbours of both sexes and all ages numbering sometimes three figures. Proceedings have been known to be interrupted by a threat of collapse of the house under the extra weight of spectators, only to be resumed when the house pillars have been reinforced.

An interesting Brunei river village custom is connected with the disposal of the placenta and membranes (the afterbirth). They are first cleaned and washed very carefully, squeezing and wringing until all blood is removed. If the child is a female, a needle, thread, a piece of cloth, and some betel nut are wrapped in the secundines, covered with white cloth and inserted in a straw bag that has been smoked in incense. If male, the articles are some iron nails, some tobacco and betel nut. The straw bag is then placed on a small wooden raft with a lighted candle at each of the four corners and set floating on an ebb tide.



11. The great failing of native methods is in the care of the new born baby. It is not uncommon for a new baby awaiting mother's milk to be pinched until it cries, and then for the little open mouth to be rammed full of a paste made of rice and bananas well masticated by the attendant. Betel nut and other irritants are almost invariably applied to baby's abdomen in a compress and it is very rare to find an adult Brunei Malay not bearing scars of such application in his infancy.

It must be supposed that the Brunei mother is being influenced for the better by the activities of this department but the infantile mortality rate this year is very disappointing. It is to be hoped that educative propaganda of which the baby show is in example will have a beneficial effect.

In the writer's opinion the major contributory cause of the high figure is infantile beri-beri and related deficiency diseases although the final cause is often given as pneumonia, gastro-enteritis or such like.

#### IV.—PUBLIC HEALTH

##### (a) GENERAL

12. The scattered nature of the population and the inaccessibility of large parts of the State render Public Health measures practically impossible except in the main centres of population.

The three areas of Brunei, Tutong and Kuala Belait are controlled by Sanitary Boards which are responsible for all matters of housing, sanitation, etc. All houses in Sanitary Board areas are inspected by officers of the Boards. In Brunei town, but outside the Sanitary Board area, the majority of the Malay population has lived from time immemorial in huts raised on piles built on mud flats in the river.

These flats are exposed at low tide but flooded at high tide, the tides effectively dealing with sanitation. There is overcrowding in this river village and a remarkable lack of privacy, three or four related families often living in a single room, but the prevalent ill health and high mortality is caused more by ignorance of feeding and general hygiene than by overcrowding. The rooms are large and well ventilated, the chief source of ventilation being the floors which are made of separated slats between which rubbish falls into the water and fresh air enters the room. The maternity nurse has more than once been startled by the sight of a crocodile below the floor attracted by the smell of blood.

13. There are two water supplies in the town of Brunei, one of which incorporates a sand filter. Plans are in hand for installing a chlorinating plant at the main supply. In addition a number of small hill streams have been harnessed and led out in pipes overhanging the river so that river dwellers can fill receptacles with pure water for domestic use. A recent rough census of the amount of water taken away in boats from these pipes puts the average consumption per head per day for the river village at about two gallons.

Doubt was cast during the year on the main supply but there was no evidence of disease having been derived from either. All the catchment areas are uninhabited.

14. In the main centres of population bucket latrines are used and the sewage is dumped in a convenient tidal river. A few houses in Brunei and Kuala Belait possess water born systems, some discharging direct into a neighbouring river and some by septic tanks. In the river village there



is no difficulty and in many other places the latrine is built on tiles over the tide, this method being employed for the public latrines in Brunei town and Kuala Belait. Considerable trouble is caused from time to time by people moving from the river to the land and overlooking the absence of a tide under and around their houses.

15. During the year, the Federated Malay States Survey Department established a survey camp at mile four, Tutong Road, where at times more than one hundred men resided. The health of the whole contingent kept comparatively good, although the nature of their work took them into very unhealthy jungle, and there was naturally a certain amount of sickness. The camp area was known to be infested with *Anopheles kochi* and *Anopheles barbirostris*, but not a single case of malaria originated there. The method of control was that, if a resident in the camp showed either fever or parasites in the blood, he was immediately removed to a place where there were known to be no *Anopheles* and kept there until he was free from infection. There were no deaths from any cause.

#### (b) VITAL STATISTICS

16. The estimated population of the State on December 31st was 34,016. Births totalled 1,454, giving a birth rate of 42.74 per mille. Deaths were 1,155, giving a crude death rate of 33.95 per mille. The 1935 rates were: birth rate 43.70 and death rate 23.78, and the 1934 rates: 39.61 and 37.51 respectively. Details are given at Appendix V. The table showing the deaths from principal causes is unreliable because only a small proportion of causes of death is diagnosed by medical practitioners and that often from scanty data. Table 6, Appendix V shows more deaths than previous years classed as "Uncertified". This is because many deaths which would previously have been listed as "Certified by Registering Officers after death" have this year been marked "Uncertified" on account of the vagueness of the Registering Officer's certification.

17. The infantile mortality rate has unfortunately shown an increase from 1935. Paragraphs 4 and 11 of this report refer to it. The rate was 352 per thousand live births compared with rates of 355 and 210 respectively for 1934 and 1935. High fluctuations in the rate are to be expected but an increase this year is exceptionally disappointing after the much increased amount of work that has been done. Attendances at the Child Welfare Clinic are in 1934:—1,624, in 1935:—3,186, and in 1936:—4,330.

#### (c) FOOD ANIMALS

18. All buffaloes, cattle, pigs and goats slaughtered in the Brunei area are inspected before and after death by officers of the department. There are two slaughter houses in Brunei Town, one for pigs and one for other animals. Five hundred and twenty-four pigs, 280 buffaloes, 52 cattle and 13 goats were slaughtered there during the year. Four pigs were rejected for slaughter on account of disease.

#### (d) BERI-BERI

19. Practically the whole population of the Brunei river village, some 10,000 people, live on the verge of vitamin deficiency and a small upset frequently throws a patient into beri-beri. This is accentuated by the local custom of feeding parturient women and other ailing persons on nothing but white rice. It is ignorance more than inability to obtain the proper foods that appears to be the chief cause, and attempts at education are met with a disheartening response.



For instance a hospital cook who has a better opportunity than any other person in the State of knowing the exact ingredients and method of preparation of a diet to combat beri-beri, asked me about mid-year for a bottle of beri-beri medicine for his wife.

In the writer's opinion the only way to combat the beri-beri of Brunei river village is to make it very much easier for the people to get partly milled rice than to get polished rice.

#### (e) HELMINTHS

20. Ascariasis (round worm) is exceedingly common and is rather the rule than the exception amongst school children.

Ankylostomiasis is much less common.

All school children are examined annually and infected children are treated. Figures are given at Appendix IV.

Other helminths seen in the State are *Oxyuris vermicularis* (thread worm) *Strongyloides stercoralis*, *Trichuris trichiura* (whip worm) and *Hymenolepis nana*. A few cases of elephantiasis due presumably to filariasis have been seen but the worm has not been found.

#### (f) MALARIA

21. The main centres of population are kept practically free from malaria but unfortunately there are still bad spots in certain parts of the State, notably along the Tutong and Barakas Roads. In the Brunei Town Sanitary Board Area only three breeding places of anopheles were discovered during the year. Permanent works effectively disposed of two of these and plans were in hand at the year end for dealing with the third.

22. A noteworthy feature is the almost complete absence of malaria in the jungle area drained by the Tutong river, although no antimalarial work was done in this area. The four schools in this up-river district (Tumpuan Ogas, Tanjong Maya, Lubok Pulau and Okong) showed a nil spleen rate amongst 120 pupils.

No mosquito survey was done.

23. All school children are examined annually and spleen rates are given at Appendix IV.

The highest rate was at Kilanas (Tutong Road) and the lowest, apart from nil rates, at Brunei Town where only one child out of 366 had a palpable spleen. The rate for school children throughout the whole State was 5.95%.

24. Laboratory returns are given at Appendix VI.

One thousand one hundred and thirty-eight blood films were examined for malaria parasites with 228 positive as follows:—Subtertian 110, Benign Tertian 79, Quartan 31, and mixed infection 8. These figures of course are not a proper indication of the incidence of malaria in the State as the films were from selected patients.

Mosquito returns are at Appendix VII.

#### (g) LEPROSY

25. There are only two known lepers (both male Chinese) in the State, both being in an advanced but quiescent condition.

They were kept in isolation at a settlement about 8 miles from Brunei where each lived in a separate house, a third house being occupied by an

aged Chinese non-leper who was able to assist them and act as go-between with the outside world. Great industry was shown at the settlement in growing vegetables for their own use.

#### (h) MENTAL DISORDERS

26. There is no mental hospital in the State. Whenever possible, mental cases are treated in the ordinary wards of the Government hospitals but if necessary they are sent to the Singapore Mental Hospital. Sixteen mental cases were treated during the year and none were sent to Singapore. There were five Brunei lunatics in the Singapore Mental Hospital during the year, and their cost to the Brunei Government was \$549.

#### (i) VENEREAL DISEASES

27. Syphilis is practically non-existent in the State of Brunei, the few cases seen all having originated elsewhere but that this happy state of affairs is brought about by the sexual virtue of the population is denied by the fact that gonorrhœa is exceedingly common.

The incidence of gonorrhœa is not properly portrayed in the hospital and disease statistics appended to this report on account of its extreme mildness in the vast majority of cases. When an opportunity occurs of a proper examination of a Brunei adult patient, it is usual to find evidence of gonorrhœa, but severe symptoms and complications are conspicuous by their absence.

### V.—HOSPITALS AND DISPENSARIES

28. The Government maintains three hospitals, *viz.*, a well equipped hospital of about 35 beds at Brunei, and smaller hospitals at Temburong (Bangar) and at Tutong; in addition the whole State with the exception of the British Malayan Petroleum Company's area is covered by a travelling dispensary service.

There was no special vehicle used for the travelling dispensary owing to the varied nature of the travelling undertaken but regular journeys were made by officers of the department. The figures showing the work done are included in Appendix X under the headings of the stations from which the journeys started *i.e.* Brunei, Tutong or Temburong.

29. Admissions to Government Hospitals are shown in Appendix VIII and Surgical Operations in Appendix IX.

The Brunei Malay is averse from entering hospital as an inpatient although the position in this respect continues to improve. There were 626 admissions in 1936 compared with 503 in 1935 and 373 in 1934.

Out-patient attendances show a large increase over previous years, the numbers being as follows 1934 :—11,107, 1935 :—10,922, 1936 :—13,439. The decrease in 1935 is explained in the Medical Report of that year, para. 34.

30. There are no radiological facilities whatsoever in the State and it is interesting to note how well one can manage without. No case of fracture of bone suffered from not being radiographed; all obtained perfect functional results including such as fracture-dislocation of the elbow joint in a child. The nearest Xray apparatus is at Miri, a day's journey in good weather from Brunei; it was not necessary to send any cases there for radiological examination during the year.



## VI.—KUALA BELAIT

31. The British Malayan Petroleum Company at Kuala Belait maintains a very well equipped hospital in charge of a Medical Officer. By agreement with the Company all the services of this hospital and the Company's medical staff are available to Government. The cost to Government for 1936 was \$3,811.91. The figure \$5,317.04 shown in Appendix II includes payment for the latter half of 1935 as well as for the whole of 1936.

32. The anti-malarial and other health work in the Kuala Belait area is in the hands of the Assistant Resident who acts on the advice of the Oil Company's Medical Officer. The Government Medical Officer is a member of the Belait Sanitary Board and is constantly in touch with the health work in that area. There is a Sanitary Inspector holding the diploma of the Royal Sanitary Institute on the establishment of the Assistant Resident. Some mosquito statistics for Belait area given in Appendix VII.

## VII.—METEOROLOGY

33. The climate is equable and very similar to that of the Malayan Peninsula; the characteristic is a constant moist heat ranging from about 75° F., upwards but never reaching 90°. There tends to be a bigger range of temperature nearer the sea and for Europeans the Belait climate is pleasanter than that of Brunei town (*see* map in back cover).

The annual rainfall varies from about 100 inches at the coast to over 200 at some inland stations, although in 1936 the latter figure was not actually reached at any place where records were kept.

Room temperature records are kept at the three Government hospitals, and rainfall returns are available from eight stations. Generally there is a wet season about the end and beginning of the year and a minor wet season about the middle of the year, but the latter is vague and variable. In 1936 for instance it lasted from April to July with a dry intermission in June. The wettest month was October with May a close second and the driest February. The greatest rainfall in one day in Brunei Town was 4.92 inches on July 10th. Figures are given at Appendix XI.

W. G. EVANS,  
Medical Officer,  
Brunei.

BRUNEI, February, 1937.

## APPENDIX I

## STAFF OF THE MEDICAL DEPARTMENT, 1936

- (1) Medical Officer
  - (2) Dresser (Prize Appointment)
  - (3) Dressers Grade II Two
  - (4) Dressers Grade III Four
  - (5) Probationer Dressers Three
  - (6) Clerk
  - (7) Sanitary Inspector
  - (8) Market Inspector
  - (9) Mosquito Inspector
  - (10) Health Nurse
  - (11) Probationer Nurse
  - (12) Midwife
  - (13) Male Attendants Five
  - (14) Female Attendants Two
  - (15) Peon
  - (16) Cooks Four
  - (17) Gardeners Two
- 

## APPENDIX II

			<i>Whole State</i>	<i>Medical Department</i>
			\$      c.	\$      c.
Total Revenue	...	...	928,689 24	2,512 20
Total Expenditure	...	...	779,521 43	42,108 79

## MEDICAL DEPARTMENT REVENUE 1936

Sale of Medicines and Hospital Charges	...	...	2,512 20
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## MEDICAL DEPARTMENT EXPENDITURE 1936

Personal Emoluments	...	...	22,627 55
Transport (including car allowance)	...	...	1,718 56
Medicine and Instruments	...	...	3,710 15
Hospital Diets	...	...	2,371 42
Clothing and Laundry	...	...	440 62
Contingencies	...	...	355 11
Maintenance of Lunatics	...	...	549 00
Conservancy	...	...	2,235 97
Contribution to Belait Medical Services	...	...	5,317 04
Health Work	...	...	2,733 32
Hospital Furniture	...	...	50 05
Total			42,108 79



## APPENDIX III

TABLE I

*Annual return of the Women and Child-Welfare Clinic  
for the year 1936*

<i>Diseases</i>				<i>No. of cases</i>
Infectious disease :				
(a) Malaria (all forms) ...	...	...	...	35
(b) Chicken pox ...	...	...	...	14
(c) Yaws ...	...	...	...	18
(d) Dysentery :				
(1) Amœbic ...	...	...	...	7
(2) Bacillary ...	...	...	...	12
(e) Tuberculosis :				
(1) Pulmonary ...	...	...	...	5
(f) Pneumonia (all forms) ...	...	...	...	19
Venereal disease :				
(a) Gonorrhœa (all forms) ...	...	...	...	3
(b) Syphilis ...	...	...	...	2
Helminthic infection :				
(a) Ascariasis ...	...	...	...	239
(b) Ankylostomiasis ...	...	...	...	12
Respiratory disease ...	...	...	...	318
Circulatory disease ...	...	...	...	3
Gastro-Intestinal disease ...	...	...	...	417
Genito-Urinary (Non-venereal) ...	...	...	...	15
Diseases of women :				
(a) Amenorrhœa ...	...	...	...	11
(b) Dysmenorrhœa ...	...	...	...	12
(c) Confinement ...	...	...	...	16
(d) Complete abortion ...	...	...	...	12
(e) Threatened abortion ...	...	...	...	1
(f) Other ...	...	...	...	32
Violence (all forms) ...	...	...	...	155
Diseases of skin, etc., etc. ...	...	...	...	2,972
Total			...	4,330

Total 1935 :—3,186.

TABLE 2

*Record of the Government Maternity Cases for 1936*

Total number of maternity cases attended by Govern- ment midwives ...	...	...	...	529
Babies born in hospital ...	...	...	...	15
Full term babies born alive with normal labour ...	...	...	...	480
Full term still-born babies ...	...	...	...	13
Premature babies born alive ...	...	...	...	4

APPENDIX III—*continued*TABLE 2—*continued**Record of the Government Maternity Cases for 1936—continued*

Premature still-births	...	...	...	2
Pairs of twins	...	...	...	15
Abnormal presentations (all forms)	...	...	...	9
(a) Transverse	...	...	...	2
(b) Right sacro-anterior	...	...	...	4
(c) Left sacro-anterior	...	...	...	2
(d) Brow, cord and left hand	...	...	...	1
Ante-partum hæmorrhage	...	...	...	2
Post-partum hæmorrhage	...	...	...	6
Secondary post-partum hæmorrhage	...	...	...	3
Puerperal fever, (all forms)	...	...	...	2
Malformation of babies, (all forms)	...	...	...	6
Ante-natal cases	...	...	...	80
Surgical induction of labour	...	...	...	2
Abnormal labours	...	...	...	9
Contracted pelvis	...	...	...	1
Diseases occurring during ante-natal period	...	...	...	33
(a) Albuminuria due to gonorrhœa	...	...	...	3
(b) Albuminuria due to non-venereal disease	...	...	...	4
(c) Beri-beri	...	...	...	25
(d) Pulmonary tuberculosis	...	...	...	1
Maternal mortality (all causes)	...	...	...	4
(a) Bacillary dysentery	...	...	...	1
(b) Ante-partum hæmorrhage	...	...	...	1
(c) Secondary post-partum hæmorrhage	...	...	...	1
(d) Peritonitis from ruptured uterus following obstructed labour	...	...	...	1
Average maternity cases per week	...	...	...	10
Average weight of babies at birth, in Brunei	...	...	...	6½ lbs.

TABLE 3

*Table of Nationality of Maternity Cases*

Brunei Malays	...	...	...	475
Chinese	...	...	...	37
Kedayans	...	...	...	1
Dusun	...	...	...	3
Indians	...	...	...	2
Europeans	...	...	...	1
Dayaks	...	...	...	1
Others	...	...	...	9



## APPENDIX IV

*Table showing the results of Spleen and Stool examination of School Children in 1936*

Place	Number examined	Palpable Spleen	Spleen Rate %	Number of Stools examined	Ascaris	Infection Rate %	Ankylostoma	Infection Rate %
Brunei ...	366	1	·27	379	171	45·12	2	·53
Gadong ...	13	4	30·77	13	5	38·46	1	7·69
Barakas ...	20	4	20·00	17	4	23·53	4	23·53
Kilanas ...	42	17	40·48	42	28	66·67	4	9·52
Sengkurong ...	28	9	32·14	31	22	70·97	0	0
Temburong (Bangar) ...	21	1	4·76	25	20	80·00	1	4·00
Labu ...	22	1	4·55	23	16	69·57	0	0
Muara ...	66	13	19·70	66	58	87·88	1	1·52
Tutong ...	48	1	2·08	50	36	72·00	1	2·00
Penanjong ...	27	1	3·70	26	24	92·31	1	3·85
Tempuan Ogas ...	25	0	0	35	27	77·14	0	0
Tanjong Maya ...	40	0	0	33	23	69·70	0	0
Lubok Pulau ...	17	0	0	21	15	71·43	0	0
Okong ...	38	0	0	44	25	56·82	0	0
Belait ...	137	1	·73	104	39	37·50	5	4·81
Labi ...	16	0	0	9	5	55·56	1	11·11
Bukit Sawat ...	15	3	20·00	11	6	54·55	1	9·09
Total ...	941	56	5·95	929	524	56·4	22	2·37

## APPENDIX V

VITAL STATISTICS—TABLE I

*Estimated population with birth and death rates*

Year	Population	Births	Deaths	Birth-rate per mille	Death-rate per mille
1933	32,869	1,411	867	42·93	26·38
1934	32,971	1,306	1,237	39·61	37·51
1935	33,732	1,475	802	43·70	23·78
1936	34,016	1,454	1,155	42·74	33·95

## APPENDIX V—continued

TABLE 2

*Births registered according to nationalities*

Malays	Chinese	Dayaks	Dusuns	Indians	Javanese	Kedayans	Muruts	Tutongs	Europeans	Others	Total
719	167	28	91	9	9	269	13	133	1	15	1,454

TABLE 3

*Deaths from Principal Causes, year ending 31st December, 1936*

<i>Diseases</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Malaria	7	3	10
Enteric fever	1	—	1
Dysentery	5	6	11
Influenza	—	—	—
Tuberculosis of respiratory system	28	9	37
Other forms of tuberculosis	—	—	—
Leprosy	—	—	—
Syphilis	—	—	—
Ankylostomiasis	1	—	1
Fever unspecified	2	1	3
Cancer	1	—	1
Beri-beri	15	9	24
Diseases of the heart	1	1	2
Other diseases of circulatory system	1	—	1
Bronchitis	1	1	2
Pneumonia (all forms)	5	6	11
Other diseases of the respiratory system	1	2	3
Diarrhoea and enteritis	13	20	33
Other diseases of the digestive system	6	6	12
Convulsions	49	37	86
Diseases of the nervous system and sense organs	1	2	3
Non-venereal diseases of gent. urinary System	2	3	5
Diseases of pregnancy, child-birth and puerperal state	—	6	6
Premature birth and diseases of early infancy	5	4	9
Old age and senility	58	69	127
Violence (all forms)	2	2	4
Other causes (including unknown)	427	326	753
	642	513	1,155



APPENDIX *V—continued*

TABLE 4

Deaths grouped according to age, sex and nationality

Deaths by age groups				Sex	Europeans	Eurasians	Chinese	Malays	Indians	Others	Total
0	...	...	...	M.	...	...	...	3	...	1	4
				F.	...	...	...	1	...	1	2
4	Weeks	...	...	M.	...	...	11	114	...	56	181
				F.	...	...	4	84	...	27	115
3	Months	...	...	M.	...	...	2	65	...	16	83
				F.	...	...	3	56	1	5	65
6	"	...	...	M.	...	...	3	37	...	14	54
				F.	...	...	1	26	1	12	40
1	Year	...	...	M.	...	...	3	13	...	32	48
				F.	...	1	1	20	...	14	36
5	Years	...	...	M.	...	...	2	7	...	5	14
				F.	...	...	1	7	...	9	17
10	"	...	...	M.	...	...	3	4	...	3	10
				F.	...	...	...	2	...	1	3
15	"	...	...	M.	...	...	2	12	...	4	18
				F.	...	...	1	6	...	6	13
20	"	...	...	M.	...	...	2	8	...	5	15
				F.	...	...	2	14	...	2	18
25	"	...	...	M.	...	...	...	6	1	8	15
				F.	...	...	2	9	...	5	16
30	"	...	...	M.	...	...	1	9	...	9	19
				F.	...	...	...	11	...	11	22
35	"	...	...	M.	...	...	5	10	...	8	23
				F.	...	...	...	19	...	11	30
40	"	...	...	M.	...	...	2	7	...	8	17
				F.	...	...	...	11	...	5	16
45	"	...	...	M.	...	...	4	5	1	3	13
				F.	...	...	...	7	...	7	14
50	"	...	...	M.	...	...	2	17	...	9	28
				F.	...	...	...	12	...	11	23
55	"	and over	...	M.	...	...	8	56	...	36	100
				F.	...	...	...	61	...	21	83
Totals ... {				M.	...	...	50	373	2	217	642
				F.	...	1	15	346	3	148	513
Total Deaths ...				M.F.	...	1	65	719	5	365	1,155

TABLE 5

### Infantile mortality by months

Jan.		Feb.		Mar.		April		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.		Total		Total Births	Rate per 1,000 births
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
43	29	31	21	35	21	26	18	22	17	31	17	27	16	29	16	29	19	15	16	19	13	15	19	322	222	1,454	352

## APPENDIX V—continued

TABLE 6

*Deaths registered as regards certification*

Certified by Medical Practitioners	...	...	104
Certified by Registering Officers after death	...	...	182
Uncertified	...	...	869
Total			1,155

## APPENDIX VI

## LABORATORY RETURNS 1936

			<i>Brunei</i>	<i>Tutong</i>	<i>Tem- burong</i>
(1) Blood Films					
Malaria :					
(a) Benign Tertian	...	...	66	7	6
(b) Quartan	...	...	30	—	1
(c) Sub-Tertian	...	...	109	1	—
(d) Mixed Infection	...	...	7	—	1
(e) Negative	...	...	837	46	27
Total			1,049	54	35
(2) Stools :					
(1) <i>Ankylostoma duodenale</i>	...	...	129	9	6
(2) <i>Ascaris lumbricoides</i>	...	...	629	207	29
(3) Mixed A.L.O. and A.D.O.	...	...	308	6	1
(4) <i>T. trichiura</i>	...	...	182	16	11
(5) <i>Strongyloides stercoralis</i>	...	...	88	1	—
(6) <i>Giardia intestinalis</i>	...	...	4	—	—
(7) <i>Hymenolepis nana</i>	...	...	2	—	—
(8) <i>Entamoeba histolytica</i>	...	...	9	—	—
(9) Bacteria and pus cells	...	...	44	—	—
(10) Blood and pus cells	...	...	56	4	1
(11) Negative	...	...	690	127	9
Total			2,141	370	57



## APPENDIX VI—continued

## LABORATORY RETURNS 1936—continued

			Brunei	Tutong	Tem- burong
(3) Sputum :					
(1) Tuberculosis bacilli	...	...	24	—	2
(2) Negative	...	...	85	2	3
			—	—	—
Total	...		109	2	5
			—	—	—
(4) Urine (microscopical) :					
(1) Pus and organisms	...	...	24	—	—
(2) Casts (all forms)	...	...	453	14	—
(3) Negative	...	...	537	23	—
			—	—	—
Total	...		1,014	38	—
			—	—	—
(5) Bacteriological examination of smears :					
(1) Gonococci	...	...	25	—	—
(2) Other bacteria	...	...	52	—	—
(3) Negative	...	...	21	—	—
			—	—	—
Total	...		98	—	—
			—	—	—

## APPENDIX VII

TABLE I

## Record of Anopheline Larvæ, Brunei District

Months	A. kochi	A. barbi- rostris	A. leuco- sphyrus	A. sepa- ratus	A. hyrc- anus	A. tes- selatus	A. umb- rosus	Total
January	62	34	13	...	...	...	...	109
February	...	68	32	...	...	...	...	100
March	77	50	11	...	...	...	...	138
April	69	40	...	24	...	...	...	133
May	54	134	...	...	22	...	...	210
June	145	42	...	17	...	...	...	204
July	210	148	61	...	...	21	12	452
August	307	142	77	14	...	...	25	565
September	77	132	22	18	...	...	...	249
October	208	45	...	...	...	...	...	253
November	116	59	19	...	29	9	...	232
December	85	23	...	...	19	...	11	138
Total	1,410	917	235	73	70	30	48	2,783

## APPENDIX VII—continued

TABLE 2

*Breeding places of Anopheline Mosquitoes in Brunei District*

Months		Pools	Wells	Drains	Swamps	Seepages	Streams	Padi fields	Holes	Ponds	Total
January	...	2	3	1	1	1	...	...	..	...	8
February	...	4	1	1	...	1	...	...	...	...	7
March	...	3	1	3	1	...	...	...	...	...	8
April	...	1	2	3	...	...	2	...	...	...	8
May	...	4	2	1	...	...	1	...	...	...	8
June	..	3	1	2	1	2	..	...	...	...	9
July	...	5	3	3	...	4	2	...	...	...	17
August	...	6	4	6	3	3	...	1	...	...	23
September	...	1	3	8	1	1	...	...	...	...	14
October	...	2	1	4	...	...	...	...	43	...	50
November	...	1	...	3	...	1	...	1	...	1	7
December	...	2	2	2	...	1	..	...	...	...	7
Total	...	34	23	37	7	14	5	2	43	1	166

TABLE 3

*Record of Anopheline Larvæ, Kuala Belait District*

Months		A. umbrosus	A. hyrcanus	A. separatus	A. baezai	A. tesselatus	A. brevialpis	A. albotænitus	A. barbumbrosus	A. novumbrosus	A. barbirostris	Total
January	...	47	82	143	16	41	79	...	...	...	...	408
February	...	39	...	115	...	24	...	17	2	...	...	197
March	...	23	...	44	10	40	169	23	...	...	..	309
April	...	...	...	11	44	12	271	15	...	7	..	360
May	...	10	...	147	...	95	278	36	...	25	...	591
June	...	45	...	59	27	98	314	...	...	...	...	543
July	...	28	...	12	...	39	119	...	...	...	...	198
August	...	20	...	...	17	...	7	6	...	...	...	50
September	...	78	...	6	77	...	18	10	...	5	...	194
October	...	81	...	34	69	68	17	...	...	4	4	277
November	...	71	...	111	11	..	54	...	...	...	...	247
December	...	65	...	150	125	...	...	..	...	21	...	361
Total	...	507	82	832	396	417	1,326	107	2	62	4	3,735



## APPENDIX VII—continued

TABLE 4

*Breeding places of Anopheline Mosquitoes in Kuala Belait District*

Months			Swamps	Pools	Earth-drains	Holes	Nipah-swamps	Streams	Total
January	...	...	12	7	10	1	...	...	30
February	...	...	14	8	...	...	...	...	22
March	...	...	28	1	...	1	...	...	30
April	...	...	18	2	1	...	2	2	25
May	...	...	14	1	4	...	...	...	19
June	...	...	22	3	2	...	...	...	27
July	...	...	4	...	4	...	...	2	10
August	...	...	4	...	...	...	...	...	4
September	...	...	8	...	...	...	...	11	19
October	...	...	5	1	...	...	...	3	9
November	...	...	12	...	1	...	...	3	16
December	..	...	23	...	...	...	...	5	28
Total			164	23	22	2	2	26	239

## APPENDIX VIII

*Annual return of Sick admitted to Government Hospitals, Brunei, Tutong and Temburong*

TABLE 1		BRUNEI		Remained	Admitted	Total	Discharged	Transferred	Died	Remaining	
Class		Specific Disease									
Infectious Disease	...	Malaria fever b.t.	...	2	31	33	33	...	...	...	
		Malaria fever s.t.	...	...	50	50	45	...	2	3	
		Malaria fever quartan	...	...	8	8	8	...	...	...	
		Malaria fever (mixed)	...	1	3	4	4	...	...	...	
		Malarial cachexia	...	3	14	17	14	...	2	1	
		Malaria fever unclass.	...	...	7	7	7	...	...	...	
		Acute cerebral malaria S.T.	...	...	1	1	...	...	1	...	
		Leprosy	...	...	1	...	1	...	1	...	
		Influenza	...	...	...	28	28	28	...	...	...
		Chicken pox	...	...	...	1	1	1	...	...	...
		Typhoid fever	...	...	...	2	2	2	...	...	...
		Para typhoid fever	...	...	...	1	1	...	...	1	...
		Tertiary yaws	...	...	...	5	5	4	...	1	...
General Disease	...	Beri-beri	...	3	44	47	44	...	1	2	
		Infantile beri-beri	...	...	1	1	...	...	1	...	
		Avitaminosis	...	...	1	1	1	...	...	...	
		Marasmus	...	1	2	3	2	...	1	...	
		Rickets	...	...	1	1	...	...	...	1	
		Secondary anæmia	...	...	1	1	1	...	...	...	
		Muscular rheumatism	...	...	2	2	2	...	...	...	
	Carried forward	...	11	203	214	196	1	10	7		

## APPENDIX VIII—continued

TABLE 1		BRUNEI							
Class		Specific disease	Remained	Admitted	Total	Discharged	Transferred	Died	Remaining
		<i>Brought forward</i> ...	11	203	214	196	1	10	7
Nervous System	...	Amentia ...	1	...	1	1	...	...	...
		Confusional insanity ...	...	1	1	...	...	...	1
		Delusional insanity ...	1	...	1	1	...	...	...
		Acute mania ...	...	2	2	1	...	1	...
		Toxic mania ...	...	1	1	1	...	...	...
		Melancholia ...	...	7	7	6	...	...	1
		Hysteria ...	...	1	1	1	...	...	...
		Senile dementia ...	1	...	1	...	...	...	1
		Neurasthenia ...	...	1	1	1	...	...	...
		Opium habit ...	3	6	9	8	...	...	1
		Tetanus ...	...	2	2	...	...	2	...
Circulatory System	...	Valvular disease of heart ...	...	1	1	...	...	...	1
Ear, Eye, Nose and Throat	...	Conjunctivitis ...	...	2	2	2	...	...	...
		Corneal ulcer ...	...	3	3	3	...	...	...
		Pterygium ...	...	1	1	1	...	...	...
		Phlyctenular ulcer ...	...	2	2	2	...	...	...
		Extroversion eye lid ...	...	1	1	1	...	...	...
		Peritonsillar abscess ...	...	1	1	1	...	...	...
		Mastoid abscess ...	...	1	1	1	...	...	...
Respiratory System	...	Asthma ...	...	8	8	8	...	...	...
		Bronchitis ...	...	3	3	3	...	...	...
		Bronchial catarrh ...	...	4	4	4	...	...	...
		Broncho pneumonia ...	...	6	6	3	...	2	1
		Lobar pneumonia ...	...	5	5	4	...	1	...
		Pulmonary tuberculosis ...	1	3	4	3	...	...	1
Venereal Disease	...	Gonorrhœa ...	...	2	2	2	...	...	...
		Gonorrhoeal arthritis ...	...	2	2	2	...	...	...
		Tertiary syphilis ...	...	1	1	1	...	...	...
Digestive System	...	Ascariasis ...	...	16	16	16	...	...	...
		Ankylostomiasis ...	...	26	26	22	...	1	3
		Amœbic dysentery ...	...	5	5	2	...	3	...
		Bacillary dysentery ...	...	8	8	7	...	1	...
		Constipation ...	...	4	4	4	...	...	...
		Appendicitis ...	...	1	1	...	...	1	...
		Dyspepsia ...	...	1	1	1	...	...	...
		Duodenal ulcer ...	...	1	1	1	...	...	...
		Gastritis ...	...	1	1	1	...	...	...
		Enteritis ...	...	1	1	1	...	...	...
		Gastro enteritis ...	...	4	4	3	...	1	...
		Obstructive jaundice ...	...	2	2	2	...	...	...
		Catarrhal jaundice ...	...	2	2	2	...	...	...
		Hæmorrhoids ...	...	1	1	1	...	...	...
		Hymenolepis nana ...	...	2	2	2	...	...	...
		Abdominal carcinoma ...	1	1	2	1	...	1	...
		Intestinal colic ...	...	3	3	3	...	...	...
		<i>Carried forward</i> ...	19	349	368	326	1	24	17



## APPENDIX VIII—continued

TABLE 1	BRUNEI								
Class	Specific Disease		Remained	Admitted	Total	Discharged	Transferred	Died	Remaining
	<i>Brought forward</i>	...	19	349	368	326	1	24	17
Digestive System	...	Carcinoma of anus	...	1	1	..	...	...	1
	...	Dentition	...	1	1	1	..	...	...
	...	Dental caries	...	1	1	1	...	...	...
	...	Pyorrhoeal abscess	...	2	2	2	...	...	...
Genito-Urinary System	...	Chronic cystitis	...	2	2	2	...	...	...
	...	Pyelitis	...	2	2	2	...	...	...
	...	Pyelo-nephritis	...	1	1	1	...	...	...
	...	Nephritis	...	6	6	6	...	...	...
	...	Ruptured urethra	...	1	1	1	...	...	...
	...	Circumcision	...	4	4	4	...	...	...
Disease of Women	...	Parturition	...	1	15	15	...	1	...
	...	Abortion	...	3	3	3	...	...	...
	...	Metrorrhagia	...	1	1	1	...	...	...
Bones and Joints	...	Fracture spine	...	1	1	2	...	...	...
	...	Fracture simple	...	1	3	4	...	...	...
	...	Fracture compound	...	...	1	1	...	...	...
	...	Dislocation elbow	...	...	1	1	...	...	...
	...	Osteomyelitis	...	...	2	2	...	...	...
	...	Sacro-iliac-arthritis	...	1	..	1	...	...	...
	...	Arthritis	...	...	1	1	...	...	...
	...	Periostitis	...	...	2	2	...	...	...
	...	Ganglion	...	...	1	1	...	...	...
Skin and Cellular Tissue	...	Tinea imbricata	...	1	18	19	16	...	3
	...	Abscess	...	...	30	30	29	...	1
	...	Axillary abscess	...	...	1	1	1	...	...
	...	Ulcer	...	...	5	5	5	...	...
	...	Eczema	...	...	6	6	6	...	...
	...	Mycosis feet	...	...	5	5	5	...	...
	...	Tinea cruris	...	...	3	3	3	...	...
	...	Dermoid cyst	...	...	1	1	1	...	...
	...	Boil	...	...	3	3	3	...	...
	...	Carbuncle	...	...	1	1	1	...	...
	...	Cellulitis	...	...	1	1	...	...	1
	...	Softsore	...	...	1	1	1	...	...
	...	Adenitis	...	...	1	1	1	...	...
	...	Hypertrophic mastitis	...	...	1	1	1	...	...
External Causes	...	Wounds	...	...	17	17	17	...	...
	...	Bruises	...	...	2	2	2	...	...
	...	Sprain	...	...	7	7	7	...	...
	...	Shark bite	...	...	2	2	2	...	...
	...	Burn	...	...	1	1	1	...	...
	...	Insect bite	...	...	3	3	3	...	...
	...	"Rangas" skin poisoning	...	...	1	1	1	...	...
	...	Torn muscle	...	...	1	1	1	...	...
	...	Contusion	...	...	1	1	1	...	...
	...	Gun shot wound	...	...	1	1	...	...	1
	...	Injury eye	...	...	2	2	2	...	...
Undefined Disease	...	Undiagnosed	...	...	1	1	1	...	...
	...	Observation	...	1	22	23	22	..	1
	...	Fyrexia U.O.	...	1	...	1	1	...	...
	...	General debility	...	...	6	6	6	...	...
		Total	...	26	545	571	520	1	25

## APPENDIX VIII—continued

TABLE 2				TUTONG										
Class				Specific Disease			Remained	Admitted	Total	Discharged	Transferred	Died	Remaining	
Infectious Disease	...	Malaria fever b.t.	...	...	...	1	1	1	...	...	...			
		Malaria cachexia	...	...	...	1	1	1	...	...	...			
		Influenza	...	...	...	1	1	1	...	...	...			
	General Disease	...	Beri-beri	...	...	...	4	4	2	1	1	...		
			Nervous System	...	Neuritis	...	...	...	1	1	1	...	...	...
					Respiratory System	...	Bronchitis	...	...	...	1	1	1	...
	Digestive System	...	Bacillary dysentery	...	...	...	2	2	2	...	...	...		
	Genito. Urin. System	...	Nephritis	...	...	..	1	1	1	...	...	...		
	Skin and Cell. Tissue	...	Abscess	...	...	..	1	1	1	...	...	...		
			Ulcer	...	...	...	2	2	2	...	...	...		
			Eczema	...	...	...	3	3	3	...	...	...		
			Tinea imbricata	...	...	...	7	7	6	...	...	1		
	External Causes	...	Wound	...	...	...	3	3	3	...	...	...		
	Undefined disease	...	Observation	...	...	...	2	2	1	...	..	1		
	Total				...	..	30	30	26	1	1	2		

TABLE 3				TEMBURONG										
Infectious Disease	...	Malaria fever b.t.	...	...	...	1	1	1	...	...	...			
		Malaria fever quartan	...	...	...	1	1	1	...	...	...			
		Malaria cachexia	...	...	...	1	1	1	..	...	...			
		Influenza	...	...	...	1	1	1	...	...	...			
	General Disease	...	Beri-beri	...	...	...	10	10	8	...	1	1		
			Circulatory System	...	Heart failure	...	...	...	1	1	...	...	1	...
					Digestive System	...	Ascites	...	...	1	1	2	...	2
	Skin and Cell Tissue	...	Abscess	...	...	...	1	1	1	..	...	...		
			Ulcer	...	...	...	2	2	2	...	...	...		
			Tinea imbricata	...	...	...	1	1	1	...	...	...		
	External Causes	...	Wound	...	...	...	3	3	3	...	...	...		
	Undefined Disease	...	Debility	...	...	...	1	1	1	...	...	...		
	Total				...	1	24	25	20	2	2	1		



## APPENDIX IX

## RETURN OF OPERATIONS PERFORMED DURING 1936

			<i>Brunei</i>	<i>Tutong</i>
<i>A.</i> —General :				
Suture of wounds	...	...	68	5
Removal of cysts, etc.	...	...	9	—
Removal of ganglion	...	...	2	—
Removal of foreign body	...	...	10	2
Repairing ear lobes	...	...	2	—
For hydrocele	...	...	2	—
For ascites	...	...	18	—
For hæmatoma	...	...	1	—
Incision of suppuration	...	...	28	2
For dislocation of elbow joint	...	...	4	—
Manipulation of fracture	...	...	13	—
Amputation of breast	...	...	1	—
Amputation toe	...	...	1	—
Amputation thumb	...	...	1	—
Circumcision	...	...	9	—
<i>B.</i> —Special :				
(1) Ear nose and throat				
For dacryocystitis	...	...	1	—
For mastoid abscess	...	...	1	—
(2) Gynæcological :				
Induction of labour	...	...	2	—
For impacted fœtus	...	...	1	—
(3) Dental				
Extraction	...	...	188	33
For pyorrhœal abscess	...	...	2	—
			<hr/>	<hr/>
			364	42
			<hr/>	<hr/>

## APPENDIX X

## ANNUAL RETURN OF OUTPATIENTS, BRUNEI GOVERNMENT HOSPITALS, 1936

<i>Disease</i>		<i>Brunei</i>	<i>Tutong</i>	<i>Temburong</i>	<i>Total</i>
Infectious disease :					
(a) Malaria (all forms)	...	516	37	61	614
(b) Yaws	...	24	10	38	72
(c) Chicken pox	...	47	1	—	48
(d) Dysentery					
(1) Amœbic	...	2	—	1	3
(2) Bacillary	...	15	—	2	17
(e) Pneumonia (all forms)	...	3	1	—	4
(f) Tuberculosis					
(1) Pulmonary	...	52	5	5	62
(2) Other	...	3	—	—	3
Venereal disease :					
(a) Gonorrhœa (all forms)	...	39	—	—	39
(b) Syphilis (all forms)	...	6	—	—	6
Helminthic infection :					
(a) Ascariasis	...	837	464	132	1,433
(b) Ankylostomiasis	...	17	13	1	31
Respiratory disease	...	898	163	170	1,231
Circulatory disease :					
(a) Valvular disease of heart	...	1	—	—	1
(b) Other	...	1	—	—	1
Gastro-intestinal disease :					
(a) Duodenal ulcer	...	9	—	—	9
(b) Other	...	1,375	431	234	2,040
Genito-urinary (non-venereal)	...	38	5	—	43
Disease of women :					
(a) Amenorrhœa	...	1	1	1	3
(b) Dysmenorrhœa	...	1	1	—	2
(c) Parturition	...	14	—	7	21
(d) Abortion	...	1	—	1	2
(e) Other	...	1	6	—	7
Violence (all forms)	...	1,373	185	139	1,697
Diseases of skin, etc., etc.	...	3,922	1,414	714	6,050
Total	...	9,196	2,737	1,506	13,439

## APPENDIX XI

## METEOROLOGY 1936

TABLE 1

*Mean room Temperature at Brunei, Tutong and Temburong Hospitals*

Month			BRUNEI			TUTONG			TEMBURONG		
			Maximum	Minimum	Range	Maximum	Minimum	Range	Maximum	Minimum	Range
January	...	...	84.39	75.61	8.78	83.71	73.29	10.42	85.58	73.45	12.13
February	...	...	85.93	76.93	9.00	85.55	75.24	10.31	88.14	74.21	13.93
March	...	...	86.13	76.77	9.36	85.71	75.06	10.65	88.97	74.65	14.32
April	...	...	86.63	76.53	10.10	86.93	75.53	11.40	87.67	75.57	12.10
May	...	...	86.00	76.42	9.58	85.51	75.64	9.87	81.87	76.06	5.81
June	...	...	86.67	75.90	10.77	86.76	74.56	12.20	88.37	74.70	13.67
July	...	...	86.48	75.83	10.65	86.38	74.06	12.32	83.35	74.74	8.61
August	...	...	86.58	76.29	10.28	87.06	74.70	12.36	88.26	75.13	13.13
September	...	...	86.70	76.30	10.40	86.30	74.53	11.77	87.53	74.73	12.80
October	...	...	85.54	76.29	9.25	85.19	74.54	10.65	86.48	74.39	12.09
November	...	...	85.90	76.33	9.57	85.30	74.56	10.74	86.10	75.17	10.93
December	...	...	85.74	76.60	9.14	85.16	75.09	10.07	86.26	75.13	11.13
Mean	...	...	85.58	76.32	9.74	85.88	74.73	11.06	86.55	74.83	11.72

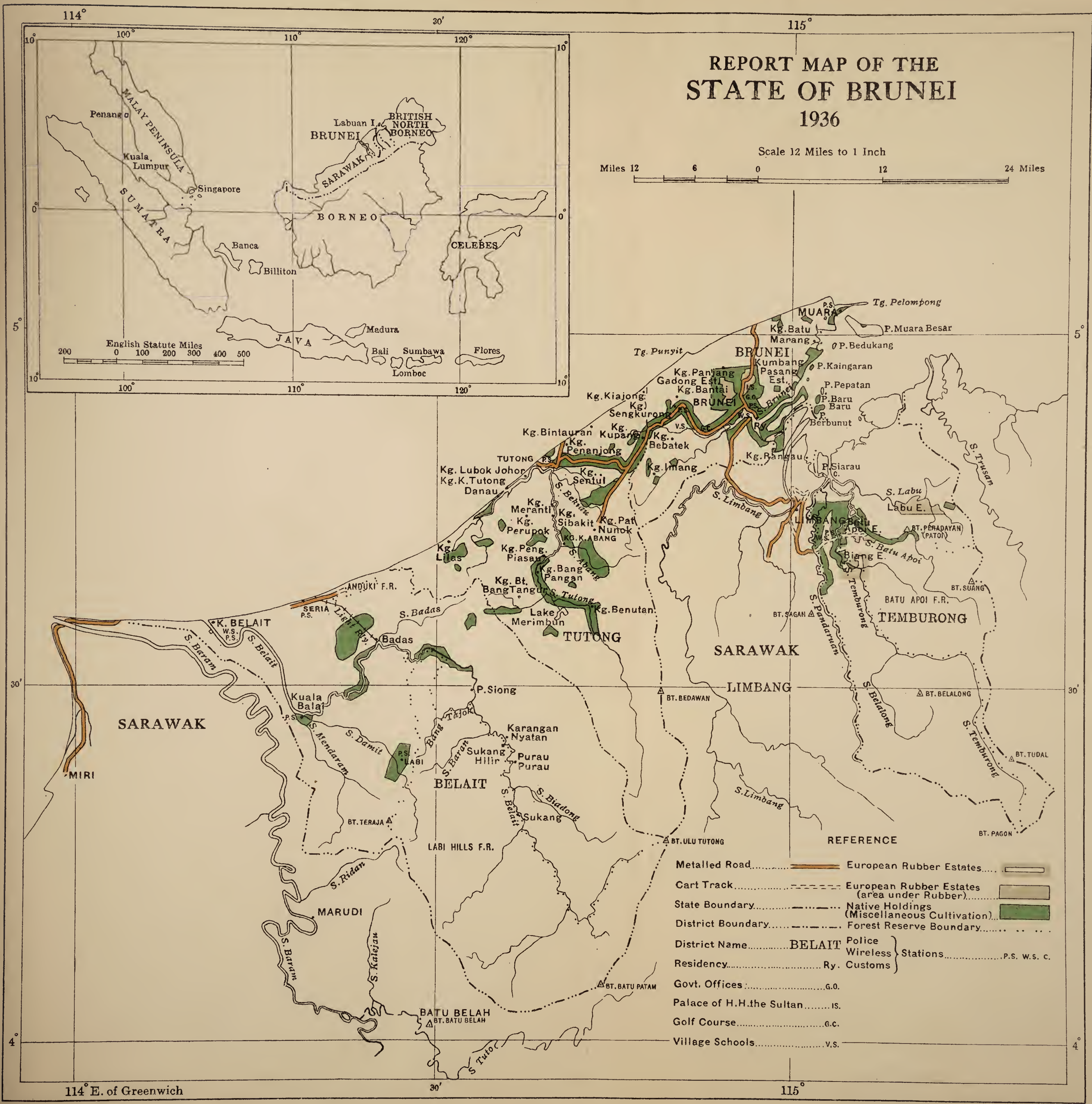
TABLE 2

*Monthly rainfall at eight Stations*

Month			BRUNEI DISTRICT				TEMBURONG DISTRICT			BELAIT DISTRICT
			Govt. Hosp. Brunei Town	Subok	Gadong	Kumbang Pasang	Labu	Biang	Batu Apoi	Belait B.M.P. Company
January	...	...	8.42	7.85	8.18	12.15	23.50	19.7	17.8	16.22
February	...	...	4.06	4.94	3.47	1.59	3.37	1.8	2.7	2.43
March	...	...	5.01	6.47	5.75	3.56	17.55	11.3	15.7	10.28
April	...	...	12.85	16.94	8.49	12.17	14.99	24.6	34.7	5.71
May	...	...	17.42	15.21	15.42	21.88	20.64	31.4	29.4	12.98
June	...	...	4.77	4.61	4.29	5.59	13.61	7.6	7.1	2.55
July	...	...	16.62	13.79	11.93	14.18	11.53	17.5	11.0	5.57
August	...	...	6.58	3.70	5.77	7.25	5.22	4.2	5.7	2.22
September	...	...	12.30	11.68	11.56	11.38	12.43	14.9	21.1	7.91
October	...	...	17.87	18.28	16.77	21.10	30.98	27.4	13.8	16.33
November	...	...	13.29	7.40	8.30	14.12	13.92	18.1	13.3	4.70
December	...	...	11.61	14.26	12.95	13.70	16.79	19.8	16.3	12.90
Total	..	..	130.80	125.13	112.88	138.66	184.53	198.3	188.6	99.80







REPORT MAP OF THE  
STATE OF BRUNEI  
1936

Scale 12 Miles to 1 Inch

Miles 12 6 0 12 24 Miles

- REFERENCE
- |                               |  |
|-------------------------------|--|
| Metalled Road.....            | European Rubber Estates.....                     |
| Cart Track.....               | European Rubber Estates (area under Rubber)..... |
| State Boundary.....           | Native Holdings (Miscellaneous Cultivation)..... |
| District Boundary.....        | Forest Reserve Boundary.....                     |
| District Name.....            | Police Stations.....                             |
| Residency.....                | Wireless Stations.....                           |
| Govt. Offices.....            | Customs.....                                     |
| Palace of H.H.the Sultan..... |  |
| Golf Course.....              |  |
| Village Schools.....          |  |















